

ABSTRACT**TREATMENT FOR DIABETES**

5 Methods and compositions for treating diabetes mellitus in a patient in need thereof
are provided. The methods include administering to a patient a composition providing a
gastrin/CCK receptor ligand, e.g., a gastrin, and/or an epidermal growth factor (EGF) receptor
ligand, e.g., TGF- α , in an amount sufficient to effect differentiation of pancreatic islet
precursor cells to mature insulin-secreting cells. The composition can be administered
10 systemically or expressed *in situ* by cells transgenically supplemented with one or both of a
gastrin/CCK receptor ligand gene, e.g., a preprogastrin peptide precursor gene and an EGF
receptor ligand gene, e.g., a TGF- α gene. The methods also include transplanting into a
patient cultured pancreatic islets in which mature insulin-secreting beta cells are proliferated
by exposure to a gastrin/CCK receptor ligand and an EGF receptor ligand.